

REMARKS:

In the outstanding Office Action, the Examiner rejected claims 1-26. No new matter is presented. Thus, claims 1-26 are pending and under consideration. The rejections are traversed below.

REJECTION UNDER 35 U.S.C. §103(a):

Claims 1-26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,269,336 (Ladd) and U.S. Patent No. 6,801,604 (Maes).

The Examiner maintains the comparison of the claimed invention with Ladd that performs speech recognition via an automatic speech recognition (ASR) unit (254) located at the electronic network when a user requests a service from an application server, even when the user is interacting with the application server. The electronic network in Ladd (which the Examiner equates with the claimed portal) waits for an input/command from a user that corresponds to a destination of an information source (application server) desired by the user, determines an electronic address of the information source based on the inputs from the user and provides an output to the user based on information retrieved from the information source (see, col. 4, lines 37-54).

Ladd, at col. 13, line 67 through col. 14, line 56, explaining routines of the voice browser explicitly states:

“At block 400, the voice browser 250 determines an initial address (i.e., a URL) and a step element or name. The voice browser then fetches the contents (i.e., a markup or language document) of the current address from the information sources (i.e., content providers and markup language servers) at block 402. After the voice browser fetches the address, the voice browser processes the contents and builds a local step table (i.e., a tree structure) at block 404.

At block 406, a prompt can be played to the user via the TTS unit of the system 200 for the current element. The voice browser then waits for an input from the user (i.e., speech or DTMF tones). At block 408, the voice browser can collect input from the user for the current step element. FIG. 5c shows an exemplary flow diagram of a routine that is executed by the voice browser to determine the grammar for speech recognition.

At block 502, the voice browser determines whether a pre-determined grammar exists for the user input and the markup language. For example, the voice browser determines whether the grammar for the user input is found in a predetermined or pre-existing grammar stored in a database or contained in the markup language. If the grammar is found, the voice browser sends the grammar to the VRU server at block 504. At block 506, the VRU server compares the user input to the grammar to recognize the user input. After the VRU server recognizes the user input, the process proceeds to block 410 (see FIG. 5a) as described below.

If a pre-existing grammar is not found at block 502, the voice browser dynamically generates the grammar for the user input. At block 508, the voice browser looks up the pronunciations for the user in a dictionary at block 508. The dictionary can be stored in a database of the system or stored on an external database (i.e., the voice browser can fetch a dictionary from the processor or from the internet).

At block 510, the voice browser generates the grammar for the user inputs based upon the pronunciations from the dictionary and phonetic rules. A software routine available from Nuance Communication, Model No. RecServer, can be used to generate the grammar. At block 512, the grammar is sent to the VRU server. The voice browser then attempts to match the grammar to the user input at block 506.

After the voice browser detects or collects an input from the user at block 408, the voice browser determines whether there is an error at block 410. If the voice browser is having difficulty recognizing inputs from the user or detects a recognition error, a timeout error, etc., an appropriate error message is played to the user at block 414. For example, if the voice browser detected too much speech from the user or the recognition is too slow, a prompt is played (i.e., "Sorry, I didn't understand you") to the user via the VRU server. If the voice browser receives unexpected DTMF tones, a prompt is played (i.e., "I heard tones. Please speak your response") to the user via the VRU server. If the voice browser does not detect any speech from the user, a prompt is read to the user (i.e., "I am having difficulty hearing you")."

As can be seen from the above discussions, a user using the Ladd system accesses services from the sources *through* voice recognition at the electronic network because no outside speech recognition is provided to the application server and control of the speech recognition is always at the portal.

Further, subsequent to processing of the speech communication via the VRU server (234) provided to the electronic network, result of the speech processing is provided to the application server (see, col. 8, lines 55-65). That is, all speech inputs (calls) from users in Ladd are handled or controlled by the electronic network, which the Examiner equates with the claimed portal.

The Examiner acknowledges that Ladd does not teach execution of the speech recognition outside of the portal, but relies on Maes as teaching the same. The Maes system, however, is limited to distributed speech processing for complex tasks requiring a specialized engine and when it would not be possible to download grammars (see, col. 4, lines 42-62). Specifically, Maes is limited to transferring input utterances only when the input requires complex speech recognition (i.e., performance based).

No motivation to combine Ladd and Maes

Applicants respectfully traverse the obviousness rejection based on Ladd and Maes because there is insufficient evidence for a motivation to modify the Ladd system that does not have a recognizer outside of the electronic network and always controls the speech recognition using the electronic network by incorporating Maes for the following reasons.

The outstanding Office Action states that it would have been obvious "to introduce speech recognition outside of the portal and the combination of Ladd in view of Maes adds another recognizer" to the Ladd system. The record, however, fails to provide the required evidence of a motivation for a person of ordinary skill in the art to perform such modification. While Maes may provide a reason for using outside speech processing when a task is complex and when a specialized engine is required, Ladd fails to suggest why a person of ordinary skill in the art at the time of the invention would be motivated to incorporate transferring speech processing tasks to speech engines outside of the portal such as discussed in Maes. In particular, Maes uses outside speech processing for performance reasons. Maes, however, does not suggest having a recognizer outside of the portal so that the portal is notified when an input corresponds to the augmenting grammar set as taught by the claimed invention (see discussion of each of the independent claims 1, 8, 17, 20, 25 and 26 below).

Even assuming that the electronic network of Ladd is comparable to the claimed portal, Ladd is not concerned with transferring control of a call and speech recognition outside of the electronic network (portal). Instead, Ladd is concerned with centralized speech processing through the electronic network (portal) and providing access to information from sources. Ladd states that its structure already achieves the goal of providing a user with access to services using markup language specifying interactive voice services sent from the application servers for speech recognition by the electronic network (see, col. 15, line 62 through col. 16, line 20 and Fig. 5a of Ladd). Ladd does not suggest that further improvement is desired, nor that another feature should be added to transfer control of the call and speech processing outside of the portal and return control back to the portal. In particular, Ladd does not suggest speech recognition outside of the electronic network (portal), such as those disclosed in the Maes.

Ladd and Maes, therefore, do not provide the motivation to perform the proposed modification of the Ladd system. In other words, an attempt to bring in the isolated teaching of Maes into the Ladd system would amount to improperly picking and choosing features from different references without regard to the teachings of the references as a whole. While the

required evidence of motivation to combine need not come from the applied references themselves, the evidence must come from *somewhere* within the record. In this case, the record fails to support the proposed modification of the Ladd system.

Furthermore, it is not clear from the record how Maes's recognizer outside the portal could be incorporated into the Ladd centralized speech processing system. Under such a modification, the Ladd speech recognition solely executed through the electronic network (portal) controlling a call from a user would have to be distributed to recognizers outside the portal. Such modification would require a substantial reconstruction or redesign of the elements of the Ladd system and would change the basic principle of operation of the Ladd system (i.e., speech recognition and control of a call always at the portal). There is no evidence that a person of ordinary skill in the art would be motivated to perform such changes and redesign.

In light of the above, there is no support, within the record of a motivation for modifying the Ladd system by incorporating Maes. Without such motivation and absent improper hindsight reconstruction, a person of ordinary skill in the art would not be motivated to perform the proposed modification, and the claimed invention is believed to be non-obvious and patentable over Ladd and Maes.

Moreover, even if one was motivated to combine Maes with Ladd, the result would be use of more powerful speech recognition components elsewhere in the network, and nothing is suggested that it would be for the purpose of changing control of the speech recognition discussed in Ladd. Since Ladd maintains control of each step of the user interaction, Ladd by itself does not present the problem which is solved by the claimed invention (see discussion below). It would only be AFTER applying Maes to Ladd that one might have a control problem.

Therefore, there is no motivation to apply the teachings of Maes to Ladd for the purposes of managing control of the speech recognition as taught by the claimed invention.

Claimed Invention

The disclosed system and method provide selective transfer of control and speech recognition between the portal and the application server. This, for example, provides a solution to systems that require the portal to perform all speech recognitions, require the portal to listen to communication between a caller and an application server to determine when control of a call should be turned over to the portal, etc.

Independent claim 1, by way of example, recites, “augmenting the speech recognition system with an augmenting grammar set supplied by a first speech recognizer of a portal” and “notifying the portal in response to an input which corresponds to the augmenting grammar set responsive to speech recognition executed via a second speech recognizer independent of the portal.” Independent claims 8 and 20 also recite similar features.

Independent claim 17 recites, “connecting a call to a portal having a first speech recognizer”, “requesting services of a remote application server having a second speech recognizer via the call” and “transmitting an augmenting grammar set of the first speech recognizer from the portal to the remote application server.” Claim 17 further recites, “connecting the call to the remote application server, breaking the connection between the call and the portal” and “notifying the portal when an input during the call corresponds to the augmenting grammar set in accordance with speech recognition executed via the second speech recognizer.”

The method of controlling a call in a speech recognition system of claim 25 includes, “augmenting a first speech recognizer of an application server with a grammar set from a portal having a second speech recognizer” and “switching control of a call to the portal in accordance with detection of an input corresponding to the grammar set via the second speech recognizer of the application server.”

Similarly, the method of controlling a call in a speech recognition system of claim 26 includes, “determining whether a call includes an input corresponding to the transferred grammar set based on speech recognition controlled by the application server” and “transferring control of the call to the portal subsequent to determining that said input corresponds to the transferred grammar set based on the speech recognition by the application server.”

It is submitted that the independent claims are patentable over Ladd and Maes.

For at least the above-mentioned reasons, claims depending from the independent claims are patentably distinguishable over Ladd and Maes. The dependent claims are also independently patentable. For example, claim 6 recites, “directing the remote application server to perform an arbitrary routine on behalf of the portal in response to a predetermined input” (see also claim 15).

Ladd and Maes, alone or in combination, do not teach or suggest the above discussed features of claims 6 and 15 including an application server performing “an arbitrary routine on

behalf of the portal in response to a predetermined input", as recited in claims 6 and 15.

Therefore, withdrawal of the rejection is respectfully requested.

WITHDRAWAL OF FINALITY

In light of the above discussion, it is respectfully submitted that the Examiner has not established a prima facie case of obviousness. Therefore, Applicants respectfully request withdrawal of the finality of the outstanding Office Action.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

If there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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